WHAT IS CLAIMED IS:

1. A resist application method comprising the steps of:

thermal processing for evaporating water from the surface of a substrate;

making the surface of the substrate hydrophobic with a hydrophobic processing material; and

applying a resist onto the substrate,

the step of thermal processing to the step of making the substrate surface hydrophobic being performed in a dehumidified atmosphere.

2. A resist application method according to claim 1, wherein

the hydrophobic processing material is hexamethyldisilazane.

3. A resist application method according to claim 1, wherein

a humidity of the dehumidified atmosphere is below 20% including 20%.

4. A resist application method according to claim 2, wherein

a humidity of the dehumidified atmosphere is below 20% including 20%.

5. A resist application method according to claim 1, wherein

the dehumidified atmosphere is dehumidified air,

nitrogen gas, a rare gas or a mixed gas of them.

6. A resist application method according to claim 2, wherein

the dehumidified atmosphere is dehumidified air, nitrogen gas, a rare gas or a mixed gas of them.

7. A resist application method according to claim 3, wherein

the dehumidified atmosphere is dehumidified air, nitrogen gas, a rare gas or a mixed gas of them.

8. A resist application method according to claim 1, wherein

in the step of thermal processing, a temperature of the substrate is above 100°C including 100°C.

9. A resist application method according to claim 2, wherein

in the step of thermal processing, a temperature of the substrate is above 100°C including 100°C.

10. A resist application method according to claim 3, wherein

in the step of thermal processing, a temperature of the substrate is above 100°C including 100°C.

11. A resist application method according to claim 5, wherein

in the step of thermal processing, a temperature of the substrate is above 100°C including 100°C.

12. A resist application method according to claim

1, wherein

in the step of making the surface of a substrate hydrophobic, the substrate surface is made hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

13. A resist application method according to claim 2, wherein

in the step of making the surface of a substrate hydrophobic, the substrate surface is made hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

14. A resist application method according to claim 3, wherein

in the step of making the surface of a substrate hydrophobic, the substrate surface is made hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

15. A resist application method according to claim 5, wherein

in the step of making the surface of a substrate hydrophobic, the substrate surface is made hydrophobic with a temperature of the substrate surface being above 100°C including 100°C.

16. A resist application method comprising the steps of:

thermal processing for evaporating water from the

surface of a substrate;

making the surface of the substrate hydrophobic with a hydrophobic processing material; and

applying a resist onto the substrate,

in the step of thermal processing, a temperature of the substrate being above 150°C including 150°C.

17. A resist application method according to claim 16, wherein

in the step of thermal processing, a temperature of the substrate is above 200°C including 200°C.

18. A resist application device comprising:

a thermal processing unit for performing thermal processing to evaporate water from the surface of a substrate in a dehumidified atmosphere;

a hydrophobic processing unit for making the substrate surface hydrophobic with a hydrophobic processing material, keeping the dehumidified atmosphere; and

a resist application unit for applying a resist onto the substrate.

19. A resist application device according to claim 18, wherein

the hydrophobic processing unit further comprises a heating means.

20. A method for fabricating a semiconductor device comprising the step of:

applying a resist onto a semiconductor substrate by the resist application method according to claim 1.